



## Influence of weather conditions and season on physical activity in adolescents

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### Abstract:

**PURPOSE:** Little is known about how seasonal variation in physical activity relates to declining physical activity in adolescence. We quantified how each of daily weather conditions and season affect physical activity during adolescence. **METHODS:** We followed 1293 students, initially aged 12 to 13 years over 5 years. Participants completed a 7-day physical activity recall checklist every 3 months. Data on daily weather conditions were obtained from Environment Canada. The association between the number of physical activity sessions per day, and each of season, and daily weather conditions was assessed in Poisson regressions. **RESULTS:** Adjusting for age, sex, and month, the average number of physical activity sessions per day was 2% to 4% lower for every 10 mm of rainfall and 1% to 2% higher for every 10 degrees C increase in temperature. Although every 10 cm of snow accumulation was associated with 5% higher activity rates, days with snowfall had lower physical activity. Physical activity was lower during winter and increased during warmer months. However, the warm-month increases did not compensate for winter decreases so that activity decreased by 7% yearly. **CONCLUSIONS:** Declines in physical activity during adolescence may be partly explained by declines during winter. Increasing opportunities for physical activity during poor weather, in particular during winter, may mitigate declines in physical activity during adolescence.

**Source:** <http://dx.doi.org/10.1016/j.annepidem.2008.12.008>

### Resource Description

#### Exposure :

weather or climate related pathway by which climate change affects health

Precipitation, Temperature

**Temperature:** Fluctuations

#### Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

#### Geographic Location:

resource focuses on specific location

Non-United States

# Climate Change and Human Health Literature Portal

**Non-United States:** Non-U.S. North America

**Health Impact:** 

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified, Other Health Impact

**Other Health Impact:** Physical Activity

**Population of Concern:** A focus of content

**Population of Concern:** 

populations at particular risk or vulnerability to climate change impacts

Children

**Resource Type:** 

format or standard characteristic of resource

Research Article

**Timescale:** 

time period studied

Time Scale Unspecified